```
FFFFFFFFFFFFFF        111          111          XXX        XXX
FFFFFFFFFFFFFF        111          111          XXX        XXX
FFFFFFFFFFFFFF        111          111          XXX        XXX
FFF                 111111       111111         XXX        XXX
FFF                 111111       111111         XXX        XXX
FFF                 111111       111111         XXX        XXX
FFF                   111          111            XXX    XXX
FFF                   111          111            XXX    XXX
FFF                   111          111            XXX    XXX
FFFFFFFF.FFF          111          111              XXX
FFFFFFFFFFFF          111          111              XXX
FFFFFFFFFFFF          111          111              XXX
FFF                   111          111            XXX    XXX
FFF                   111          111            XXX    XXX
FFF                   111          111            XXX    XXX
FFF                   111          111          XXX        XXX
FFF                   111          111          XXX        XXX
FFF                   111          111          XXX        XXX
FFF                111111111    111111111       XXX        XXX
FFF                111111111    111111111       XXX        XXX
FFF                111111111    111111111       XXX        XXX
```

_$25

Symb

IOC
IO_C
IO_C
IO_C
IO_F
IO_S
KICL

KILL
KILL
LB_
LB_
LB_F
LB_
LB_
LOC
LOC
LOCK

LOCK
LOCK
LOCK
LOC
LOC
L_CO
L_CO
L_DA
L_DA
MAIN
MAKE
MAKE
MAKE
MAKE
MAKE
MAKE

MAKE
MAKE
MAP_
MAP_

MAP
MAR
MAR
MAR
MAR
MAR

```
RRRRRRR    EEEEEEEEEE    QQQQQ      UU      UU    EEEEEEEEEE    UU        UU
RRRRRRR    EEEEEEEEEE    QQQQQ      UU      UU    EEEEEEEEEE    UU        UU
RR     RR  EE            QQ    QQ   UU      UU    EE            UU        UU
RR     RR  EE            QQ    QQ   UU      UU    EE            UU        UU
RR     RR  EE            QQ    QQ   UU      UU    EE            UU        UU
RRRRRRR    EEEEEEE       QQ    QQ   UU      UU    EEEEEEE       UU        UU
RRRRRRR    EEEEEEE       QQ    QQ   UU      UU    EEEEEEE       UU        UU
RR   RR    EE            QQ  QQ QQ  UU      UU    EE            UU        UU
RR   RR    EE            QQ  QQ QQ  UU      UU    EE            UU        UU
RR    RR   EE            QQ    QQ   UU      UU    EE            UU        UU     ....
RR    RR   EE            QQ    QQ   UU      UU    EE            UU        UU     ....
RR     RR  EEEEEEEEEE    QQQQ  QQ   UUUUUUUUUU    EEEEEEEEEE    UUUUUUUUUU       ....
RR     RR  EEEEEEEEEE    QQQQ  QQ   UUUUUUUUUU    EEEEEEEEEE    UUUUUUUUUU       ....

LL            IIIIII     SSSSSSSS
LL            IIIIII     SSSSSSSS
LL              II     SS
LL              II     SS
LL              II     SS
LL              II       SSSSSS
LL              II       SSSSSS
LL              II            SS
LL              II            SS
LL              II            SS
LL              II            SS
LLLLLLLLLL    IIIIII   SSSSSSSS
LLLLLLLLLL    IIIIII   SSSSSSS
```

```
0000      1              .TITLE  REQUEU - REQUEUE REQUEST TO DRIVER
0000      2              .IDENT  'V04-000'
0000      3
0000      4
0000      5      ;*******************************************************************
0000      6      ;*                                                                 *
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0000     23      ;*   SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.        *
0000     24      ;*                                                                 *
0000     25      ;*                                                                 *
0000     26      ;*******************************************************************
0000     27
0000     28      ;++
0000     29      ;
0000     30      ; FACILITY:  F11ACP STRUCTURE LEVEL 1
0000     31      ;
0000     32      ; ABSTRACT:
0000     33      ;
0000     34      ;       THIS ROUTINE REQUEUES THE INDICATED I/O PACKET TO THE DEVICE
0000     35      ;       DRIVER FOR WHICH IT WAS ORIGINALLY INTENDED.
0000     36      ;
0000     37      ; ENVIRONMENT:
0000     38      ;
0000     39      ;       STARLET OPERATING SYSTEM, INCLUDING PRIVILEGED SYSTEM SERVICES
0000     40      ;       AND INTERNAL EXEC ROUTINES. THIS ROUTINE MUST BE CALLED IN
0000     41      ;       KERNEL MODE.
0000     42      ;
0000     43      ;--
0000     44
0000     45      ; AUTHOR:  ANDREW C. GOLDSTEIN  14-MAR-78  10:43
0000     46      ;
0000     47      ; MODIFIED BY:
0000     48      ;
0000     49      ;       V03-003  ROW0348          Ralph O. Weber          12-APR-1984
0000     50      ;               Change maximum byte count, UCB$L_MAXBCNT, tests to be
0000     51      ;               unsigned.  This should have been done in ROW0218, when
0000     52      ;               SYSACPFDT and IOCIOPOST were fixed, but what can I say,
0000     53      ;               "Nobody's perfect."
0000     54      ;
0000     55      ;       V03-002  ACG0408          Andrew C. Goldstein,    23-Mar-1984  11:01
0000     56      ;               Make all of global storage based
0000     57      ;
```

```
                     0000    58 ;         V03-001 RLRMXBCNT       Robert L. Rappaport    11-Mar-1983
                     0000    59 ;                 Allow for segmentation of Logical I/O (and Virtual)
                     0000    60 ;                 based on the UCBSL_MAXBCNT field.
                     0000    61 ;
                     0000    62 ;**
                     0000    63 ;
                     0000    64 ;
                     0000    65 ; EQUATED SYMBOLS:
                     0000    66 ;
 00000004            0000    67 PACKET  =  4                              ; ADDRESS OF I/O PACKET ARG
 00000008            0000    68 LBN     =  8                              ; STARTING LBN OF TRANSFER
 0000000C            0000    69 UNMAPPED= 12                              ; COUNT OF UNMAPPED BLOCKS
                     0000    70
                     0000    71          $IRPDEF                          ; DEFINE I/O PACKET OFFSETS
                     0000    72          $IODEF                           ; DEFINE I/O FUNCTION CODES
                     0000    73          $UCBDEF                          ; DEFINE UCB OFFSETS
```

```
                        0000        75  ;++
                        0000        76  ;
                        0000        77  ; FUNCTIONAL DESCRIPTION:
                        0000        78  ;
                        0000        79  ;       THIS ROUTINE REQUEUES THE INDICATED I/O PACKET TO THE DEVICE
                        0000        80  ;       DRIVER FOR WHICH IT WAS ORIGINALLY INTENDED. IT TRANSLATES THE
                        0000        81  ;       LBN INTO THE CORRESPONDING PHYSICAL BLOCK NUMBER AND CONVERTS THE
                        0000        82  ;       I/O FUNCTION CODE INTO THE APPROPRIATE PHYSICAL FUNCTION.
                        0000        83  ;       THE NUMBER OF UNMAPPED BLOCKS IS DEDUCTED FROM THE BYTE COUNT.
                        0000        84  ;
                        0000        85  ; CALLING SEQUENCE:
                        0000        86  ;       CALL REQUEUE_REQ (ARG1, ARG2, ARG3)
                        0000        87  ;
                        0000        88  ; INPUT PARAMETERS:
                        0000        89  ;       ARG1: ADDRESS OF I/O PACKET
                        0000        90  ;       ARG2: STARTING LBN OF TRANSFER
                        0000        91  ;       ARG3: NUMBER OF BLOCKS UNMAPPED
                        0000        92  ;
                        0000        93  ; IMPLICIT INPUTS:
                        0000        94  ;       CURRENT_UCB: ADDRESS OF REQUEST UCB
                        0000        95  ;
                        0000        96  ; OUTPUT PARAMETERS:
                        0000        97  ;       NONE
                        0000        98  ;
                        0000        99  ; IMPLICIT OUTPUTS:
                        0000       100  ;       NONE
                        0000       101  ;
                        0000       102  ; ROUTINE VALUE:
                        0000       103  ;       NONE
                        0000       104  ;
                        0000       105  ; SIDE EFFECTS:
                        0000       106  ;       REQUEST QUEUED TO UCB
                        0000       107  ;
                        0000       108  ;--
                        0000       109
                    00000000       110          .PSECT  $CODE$,NOWRT,LONG
                        0000       111
                        0000       112  REQUEUE_REQ::
               003C     0000       113          .WORD   ^M<R2,R3,R4,R5>          ; SAVE REGISTERS
       53    04 AC  D0  0002       114          MOVL    PACKET(AP),R3           ; GET PACKET ADDRESS
       55  0000'CA  D0  0006       115          MOVL    W^CURRENT_UCB(R10),R5   ; GET UCB ADDRESS
       1C A3    55  D0  000B       116          MOVL    R5,IRP$L_UCB(R3)        ; STORE POSSIBLY CHANGED UCB ADDRESS
  50   0C AC    09  78  000F       117          ASHL    #9,UNMAPPED(AP),R0      ; GET BYTE COUNT OF UNMAPPED BLOCKS
               12    13  0014       118          BEQL    10$                    ; BRANCH IF ALL MAPPED - NO FIXUP
       32 A3    50  C2  0016       119          SUBL    R0,IRP$L_BCNT(R3)       ; AND SUBTRACT FROM TRANSFER COUNT
32 A3  000001FF 8F  C0  001A       120          ADDL    #511,IRP$L_BCNT(R3)     ; ROUND BYTE COUNT TO NEXT BLOCK BOUNDARY
  32 A3    01FF 8F  AA  0022       121          BICW    #511,IRP$L_BCNT(R3)     ; IN CASE FULL BYTE COUNT CONTAINS A PARTIAL
       50  00B4 C5  D0  0028       122  10$:     MOVL    UCB$L_MAXBCNT(R5),R0   ; R0 = 0 or Max. permissible BCNT.
               05    12  002D       123          BNEQ    20$                    ; NEQ implies Max. permissible BCNT in R0.
       50  FE00 8F  3C  002F       124          MOVZWL  #512*127,R0            ; If 0, use default Max. permissible.
                        0034       125  20$:
       32 A3    50  D1  0034       126          CMPL    R0,IRP$L_BCNT(R3)      ; See if BCNT too large.
               04    1E  0038       127          BGEQU   30$                    ; GEQU implies we are OK.
       32 A3    50  D0  003A       128          MOVL    R0,IRP$L_BCNT(R3)      ; Else scale down to maximum allowed.
                        003E       129  30$:
       50    08 AC  D0  003E       130          MOVL    LBN(AP),R0            ; GET STARTING LBN
    00000000'9F    16  0042       131          JSB     @#IOC$CVTLOGPHY       ; CONVERT TO PHYSICAL BLOCK
```

```
00000000'9F   16  0048   132         JSB    @#EXE$INSIOQ              ; AND QUEUE TO DRIVER
              04  004E   133         RET
                  004F   134
                  004F   135
                  004F   136
                  004F   137         .END
```

```
ACL_TYPE                  = 00000007
AQB_TYPE                  = 00000005
BITMAP_TYPE               = 00000001
CACHE_TYPE                = 00000006
CHIP_TYPE                 = 00000008
CURRENT_UCB               ********   X   02
DATA_TYPE                 = 00000004
DIRECTORY_TYPE            = 00000002
EXE$INSIOQ                ********   X   02
FCB_TYPE                  = 00000000
HEADER_TYPE               = 00000000
INDEX_TYPE                = 00000003
IOC$CVTLOGPHY             ********   X   02
IRP$L_BCNT                = 00000032
IRP$L_UCB                 = 0000001C
LBN                       = 00000008
MVL_TYPE                  = 00000004
PACKET                    = 00000004
QUOTA_TYPE                = 00000005
REQUEUE_REQ                 00000000 RG   02
RVT_TYPE                  = 00000003
UCB$L_MAXBCNT             = 000000B4
UNMAPPED                  = 0000000C
VCB_TYPE                  = 00000002
WCB_TYPE                  = 00000001
```

```
               +------------------+
               ! Psect synopsis !
               +------------------+
```

PSECT name	Allocation		PSECT No.		Attributes											
. ABS .	00000000 (	0.)	00 (	0.)	NOPIC	USR	CON	ABS	LCL	NOSHR	NOEXE	NORD	NOWRT	NOVEC	BYTE
ABS	00000000 (	0.)	01 (	1.)	NOPIC	USR	CON	ABS	LCL	NOSHR	EXE	RD	WRT	NOVEC	BYTE
$CODE$	0000004F (	79.)	02 (	2.)	NOPIC	USR	CON	REL	LCL	NOSHR	EXE	RD	NOWRT	NOVEC	LONG

```
               +----------------------------+
               ! Performance indicators !
               +----------------------------+
```

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.09	00:00:00.52
Command processing	106	00:00:00.72	00:00:02.83
Pass 1	268	00:00:07.26	00:00:15.66
Symbol table sort	0	00:00:01.42	00:00:02.86
Pass 2	44	00:00:01.42	00:00:03.71
Symbol table output	4	00:00:00.03	00:00:00.17
Psect synopsis output	2	00:00:00.03	00:00:00.19
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	456	00:00:10.97	00:00:25.94

The working set limit was 1200 pages.
41385 bytes (81 pages) of virtual memory were used to buffer the intermediate code.
There were 50 pages of symbol table space allocated to hold 875 non-local and 3 local symbols.
238 source lines were read in Pass 1, producing 13 object records in Pass 2.
12 pages of virtual memory were used to define 11 macros.

```
                                        +-------------------------------+
                                        ! Macro Library statistics !
                                        +-------------------------------+

Macro library name                          Macros defined
------------------                          --------------
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                    2
_$255$DUA28:[SYSLIB]STARLET.MLB;2                 4
TOTALS (all libraries)                            6
```

920 GETS were required to define 6 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:REQUEU/OBJ=OBJ$:REQUEU MSRC$:FCPPRE/UPDATE=(ENH$:FCPPRE)+MSRC$:REQUEU/UPDATE=(ENH$:REQUEU)+EXECML$/LIB